

Comparisons of Job Characteristics

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)

Associated Occupation: Architectural and Engineering Managers (11-9041)

Compare Knowledge

Compare Skills

Compare Abilities

Compare Detailed Work Activities

Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 86

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)
Associated Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	23.2	18.9	<<	Extensive education and/or training may be required
Design	5.2	19.0	15.9	<	Expanded education and/or training may be required
Mathematics	9.2	17.4	15.1	<	Expanded education and/or training may be required
Computers and Electronics	8.4	16.9	10.8	<<	Extensive education and/or training may be required
Administration and Management	8.4	14.4	10.9	<<	Extensive education and/or training may be required
Physics	4.3	13.0	14.1	0	Current knowledge level may be sufficient
Building and Construction	4.0	10.7	10.3	0	Current knowledge level may be sufficient
Production and Processing	6.0	10.7	8.6	<	Expanded education and/or training may be required
Personnel and Human Resources	5.6	10.4	7.1	<<	Extensive education and/or training may be required
Economics and Accounting	4.4	8.1	5.6	<<	Extensive education and/or training may be required
Telecommunications	3.9	7.4	4.5	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)
Associated Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Operations Analysis	5.0	13.9	11.0	<	A higher skill level may be required
Coordination	9.1	13.3	9.8	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	13.0	11.8	<	A higher skill level may be required
Time Management	8.9	12.8	9.3	<<	Extensive development of skills in this area may be required
Management of Personnel Resources	6.9	12.2	7.5	<<	Extensive development of skills in this area may be required
Mathematics	6.2	11.7	8.6	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	10.7	10.6	0	Current skill level may be sufficient
Systems Evaluation	6.4	10.7	10.5	0	Current skill level may be sufficient
Negotiation	6.8	10.2	7.7	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	9.7	4.0	<<	Extensive development of skills in this area may be required
Management of Material Resources	3.7	9.2	4.0	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 95			
Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111) Associated Occupation: Architectural and Engineering Managers (11-9041)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.2	14.1	0	Current ability level may be sufficient
Oral Comprehension	12.5	15.0	14.6	0	Current ability level may be sufficient
Deductive Reasoning	10.6	13.9	14.1	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	15.3	>	Current ability level is likely sufficient
Written Expression	9.8	13.8	13.4	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.3	8.7	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	12.0	11.9	0	Current ability level may be sufficient
Category Flexibility	9.0	11.4	11.0	0	Current ability level may be sufficient
Number Facility	6.3	11.2	7.5	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common	Similarity of Focus Occupation to Associated Occupation: 71
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Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)
Associated Occupation: Architectural and Engineering Managers (11-9041)

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Advise clients regarding engineering problems	67
Communicate technical information	4
Develop safety regulations	74
Direct and coordinate activities of workers or staff	3
Evaluate engineering data	60
Make presentations	13
Plan testing of engineering methods	72
Prepare technical reports or related documentation	22
Read blueprints	10
Read schematics	34
Read technical drawings	7
Resolve engineering or science problems	46
Understand engineering data or reports	48
Use intuitive judgment for engineering analyses	72
Use pollution control techniques	62
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 53

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)
Associated Occupation: Architectural and Engineering Managers (11-9041)

Tools and Technologies	Exclusivity
Business function specific software	1
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Electrochemical measuring instruments and accessories	9
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory enclosures and accessories	17
Laboratory heating and drying equipment	13
Pressure measuring and control instruments	10
Spectroscopic equipment	10

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.